WHAT IS CLAIMED IS:

1.   A method of illustrating a process, the method comprising:

- representing objects as elongated shapes each containing at least one descriptor to specify an object being represented;

- representing operations on or between objects as compact predetermined shapes, each predetermined shape being adjacent an elongated shape, each predetermined shape containing at least one symbol indicative of a specific operation being represented;

- representing a control flow of said process through a connected series of possibly different control segments shapes which form a timeline, said timeline being parallel to the direction of elongation of an object shape such that a sequence of operations executed on or between objects is specified,
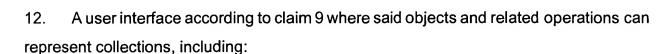wherein

- said elongated shapes are spaced apart from one another (if more than one);

- said predetermined compact shapes are adjacent elongated shapes representing objects upon which operations represented by said predetermined shapes are executed;

- said predetermined compact shapes are connected by lines to elongated shapes representing objects from which operations represented by said predetermined shapes are executed;

- different predetermined compact shapes are use to represent operations which modify an object and operations which do not modify an object;

- said control segment shapes each define an elongated strip perpendicular to the timeline;

- each of said predetermined compact shapes being located in a strip and each section of said timeline being located in a strip such that said operations represented by said predetermined compact shapes in a strip are executed according to said flow control mechanisms represented by said timeline segment located in said strip;

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- each strip contains a portion of at least one of said elongated shapes such that for each strip it is illustrated that operations on or by said object represented by said at least one elongated shapes are represented by predetermined compact shapes located in said strip and said operations are to be executed according to control mechanisms represented by said timeline segment in said strip.

2. A method according to claim 1 further including representing list assignments and parameter specifications as a separate shape containing details of said assignments and parameters.

3. A method according to claim 1 further including representing mathematical expressions as a separate shape, said shape containing said mathematical expressions.

4. A method according to claim 1 wherein said process is a real-time process, and with the method including unique shapes for objects, operations and control flow segments to distinguish the treatment of real-time aspects of the process.

5. A method according to claim 1 wherein said flow control mechanisms includes at least one mechanism selected from a group comprising:
- looping;
- conditional branching;
- nested looping;
- nested branching;
- exception branching; and
- the handling of threads.

6. A method according to claim 1 wherein notations are included for said objects and related operations can represent collections including:
- an array;

- a hash;

- a database;

- a table;

- a file;

- a queue;

- a stack;

- a tree structure; and

- a software variable.

7.   A method according to claim 1 further including representing relationships between objects as links between said objects, said links being independent of the timeline and having the ability to represent relationships such as components inheritance, definitions and database table relationships.

8.   A method according to claim 1 wherein said operations includes operations selected from a group comprising:

- sorting;

- selecting;

- parsing;

- substitution;

- formatting;

- copying;

- making assignments;

- making state changes;

- making computations; and

- returning values.

9.   A user interface for use in navigating a computer aided design software package, the user interface comprising:

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- a first set of activatable on-screen buttons (or other use activated controls such as name or menu controls), each one of said first set representing a predetermined compact shape representing an operation on or between objects;

- a second set of activatable on-screen buttons (or other controls), each one of said second set representing a segment shape representing a flow control mechanism;

- at least one activatable on-screen button (or other control) representing an elongated shape representing an object;
wherein

- there is a grid (possibly visible) for the placement of different shapes to form a diagram;

- and upon activating a control for a shape the user may use a mouse or other mechanism to initially place the selected shape within the grid, and where necessary, a dialog box is presented to the user, to use a keyboard or other controls to enter or select information to complete the information associated with such shape such as: labels, comments, field names, method names etc. to finalize said shape's representation on the screen.

10. A user interface according to claim 9 wherein said first set includes at least one predetermined shape representing an operation selected from a group comprising:
- sorting;
- - selecting;
- parsing;
- substitution;
- formatting;
- copying;
- making assignments;
- making state changes;
- making computations; and
- returning values.

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11.   A user interface according to claim 9 wherein said second set includes at least one symbol representing a flow control mechanism selected from a group comprising

- looping;

- conditional branching;

- nested looping;

- nested branching;

- exception branching; and

- thread handling.

12.   A user interface according to claim 9 where said objects and related operations can represent collections, including:

- an array;

- a hash;

- a database;

- a table;

- a file;

- a queue;

- a stack; and

- a tree structure.

13.   A user interface according to claim 9 wherein list assignments and parameter specification are represented as a separate shape containing details of said assignments.

14.   A user interface according to claim 9 wherein mathematical expressions are represented as a separate shape, said shape containing said mathematical expressions.

15.   A computer readable media having encoded thereon computer readable code for implementing a method of illustrating a process, the method comprising:

- representing objects as elongated shapes each containing at least one description

specifying an object being represented;

        - representing operations on or between objects as predetermined compact shapes, each predetermined shape being adjacent an elongated shape, each predetermined shape containing at least one symbol indicative of a specific operation being represented;

        - representing a control flow of said process as a connected series of control segment shapes forming a timeline, said timeline being parallel to the direction of elongation of an object shape such that a sequence of operations executed on or between objects is specified;

wherein

        - said elongated shapes are spaced apart from one another (if more than one);

        - said predetermined compact shapes are adjacent elongated shapes representing objects upon which operations represented by said predetermined shapes are executed;

        - said predetermined compact shapes are connected by lines to elongated shapes representing objects from which operations represented by said predetermined shapes are executed;

        - different predetermined compact shapes are use to represent operations which modify an object and operations which do not modify an object;

        - said control segment shapes each define an elongated strip perpendicular to the timeline;

        - each of said predetermined compact shapes being located in a strip and each section of said timeline being located in a strip such that said operations represented by said predetermined compact shapes in a strip are executed according to said flow control mechanisms represented by said timeline segment located in said strip;

        - each strip contains a portion of at least one of said elongated shapes such that for each strip it is illustrated that operations on or by said object represented by said at least one elongated shapes are represented by predetermined compact shapes located in said strip and said operations are to be executed according to control mechanisms represented by said timeline segment in said strip.

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16.   Computer readable media according to claim 15 wherein said process is a software process.

17.   A method according to claim 1 wherein said process is a software process.